



Dawn Mission Outreach E-News, 11th Edition

January 2007

MISSION UPDATE FROM CAROL RAYMOND, DAWN DEPUTY PRINCIPAL INVESTIGATOR

The Dawn project is still on schedule for a June 20, 2007 launch from Cape Canaveral, Florida. To meet this schedule, the spacecraft is undergoing tests in preparation for launch. Acoustics tests were successfully completed in November. Vibration tests have been completed in one orientation (z-axis) and are underway in another (y-axis). Preparations for thermal vacuum tests are underway. These tests will take place at the Naval Research Laboratory and will continue through January. While in the vacuum chamber, the spacecraft will be taken through its procedures for acquiring data on Vesta in its survey mode and its high-altitude orbit. After these tests, the spacecraft will be shipped to the Cape in April.

As the Dawn mission progresses toward launch, I invite you to stay up-to-date by visiting:

<http://dawn.jpl.nasa.gov>

Carol Raymond
Dawn Deputy Principal Investigator

GRaND FUNCTIONAL TESTING REPORT FROM LOS ALAMOS NATIONAL LABORATORY

The Gamma Ray and Neutron Detector (GRaND) will measure the elemental composition of the surfaces of Vesta and Ceres. During the weekend of December 16–17, we completed functional testing of GRaND following spacecraft vibe and pyroshock. GRaND performed nominally and is ready to proceed to the next phase of environmental testing. The spacecraft will undergo some additional testing, and will then be packed up and shipped from Orbital Sciences Corporation to the Naval Research Laboratory (NRL). In January, the spacecraft will continue environmental testing (thermal-vac) and mission scenario testing in NRL's large thermal vacuum chamber. Once testing at NRL is complete, the spacecraft will be shipped to the Cape for integration with the launch vehicle. We'll keep you posted on progress.

LANL team members supported the test remotely and were able to monitor instrument telemetry and state-of-health from Los Alamos. While some of the future tests will require travel, the ability to carry out a portion of these remotely reduces cost and increases participation by the GRaND team. A big "thank you" is owed to the Dawn project, Betina Pavri and Jason Kim, for making this happen.

Tom Prettyman
GRaND Co-Investigator

AN INSIDE PERSPECTIVE OF THE DAWN MISSION

"The Dawn spacecraft is in space!" Marc Rayman, Dawn's Project Systems Engineer announces jokingly. "Well, not quite, but it is getting a taste of the space environment courtesy of the team preparing it for its mission." Marc's October journal entry explains the functions and importance of the various tests the Dawn spacecraft has been undergoing in preparation for launch and its mission to the asteroid belt. For more information, read the Dawn Journal at: http://dawn.jpl.nasa.gov/mission/journal_10_06.asp

Marc's last journal entry for 2006 reveals, "The Dawn spacecraft has made its new year's resolution: to leave Earth behind in 2007 and embark upon its celestial voyage of adventure and discovery." For a witty and informative glimpse into the Dawn mission, read the December journal entry at:

http://dawn.jpl.nasa.gov/mission/journal_12_06.asp

OVER 360,000 WILL VENTURE TO THE ASTEROID BELT

More than 360,000 people have sent their names to the asteroid belt. A chip is currently being produced that will carry the names onboard the Dawn spacecraft when it launches in June 2007. The Dawn mission thanks you for participating in this virtual voyage to the asteroid belt.

NEWLY RELEASED: ION PROPULSION MODULE

How does an ion engine work? Why does the Dawn mission rely on this innovative propulsion system? The answers to these questions and more can be discovered through the beta version of *Structure and Properties of Matter: Ion Propulsion*, an engaging, standards-aligned module designed for use in high school physical science, chemistry, or physics classes. The complete module is available at:

http://dawn.jpl.nasa.gov/DawnClassrooms/2_ion_prop/index.asp

FOR ASPIRING ENGINEERS

Build a spacecraft model, snap a picture, and send it in to become one of Dawn's Young Engineers! Engineers and their spacecraft will be featured on the Dawn mission Web site. For more details, go to:

<http://dawn.jpl.nasa.gov/getInvolved/index.asp>

UPCOMING EDUCATION AND PUBLIC OUTREACH (E/PO) EVENT

Dawn E/PO Manager, Joe Wise, will be sharing mission information and educational materials during the Discovery Science Center's Evening of Science on January 24th in Santa Ana, California. To find out more about this free professional development opportunity for educators of all grade levels, visit:

<http://dawn.jpl.nasa.gov/education/index.asp>

ASK A SCIENTIST

Have a question about the Dawn mission and want to communicate directly with a member of the Dawn mission team? Click on the "Ask a Scientist" link located at the bottom of the Dawn Web site or simply go to: http://www.dawn-mission.org/ask_scientist/mailToDawnScientist.asp

CORRECTION FROM SEPTEMBER DAWN E-NEWS

The previous edition of the Dawn Mission Outreach E-News offered a geography challenge to all its readers. The opening message announced: "...an international group of astronomers passed a resolution in Prague, Slovakia revising the definition of a planet." Actually, the International Astronomical Union's recent assembly took place in Prague, Czech Republic.

TELL US WHAT YOU THINK

Continually seeking ways to improve the mission Web site, Dawn Education and Public Outreach is eager to receive your feedback. Please share your thoughts by completing a brief survey at:

<http://survey.mcrel.org/scripts/qweb.cgi?4CFEF46>

SUBSCRIPTION INFORMATION

Please forward this e-mail to others interested in NASA missions. New subscribers may join the Dawn mission e-news mailing list on our Web site at:

http://dawn.jpl.nasa.gov/DawnMedia/e_news.asp

The Dawn Education and Public Outreach team wishes you a joyful new year!

Dawn Mission Outreach E-News features information about the mission, its outreach Web site, and products, services, and materials available from the Dawn Education and Public Outreach (E/PO) team. Dawn is the ninth Discovery mission in NASA's Science Mission Directorate and is a collaborative partnership made up of the University of California, Los Angeles; Jet Propulsion Laboratory; Orbital Sciences Corporation; Los Alamos National Laboratory; German Aerospace Center; Max Planck Institute for Solar System Research; Italian Space Agency; and Italian National Institute of Astrophysics. Dawn outreach materials are developed under contract by Mid-continent Research for Education and Learning (McREL), Denver, CO.